

ABSTRACT

1- β -D-Arabinofuranosyluracil in 3',5'-hydroxyl-protected form is reacted with a trifluoromethanesulfonylating agent in the presence of an organic base to convert it into a 2'-triflate form, and then it is reacted with a fluorinating agent containing "a salt or complex formed by an organic base and hydrofluoric acid" to produce 2'-deoxy-2'-fluorouridine in 3',5'-hydroxyl-protected form. A deprotecting agent is further caused to act thereon to obtain 2'-deoxy-2'-fluorouridine. The 2'-deoxy-2'-fluorouridine obtained can efficiently be purified by temporarily converting it into a 3',5'-diacetyl form, recrystallizing the 3',5'-diacetyl form, and then deacetylating it. Thus, high-purity 2'-deoxy-2'-fluorouridine can be produced.